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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/067,208

04/28/98

HOWARD

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P-7860

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IM62/0508

EXAMINER

CREPEAU, J

ART UNIT

PAPER NUMBER

1745

DATE MAILED:

05/08/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
09/067,208

Applicant(s)
Howard

Examiner
Jonathan Crepeau

Group Art Unit
1745



☒ Responsive to communication(s) filed on Mar 6, 2000

☒ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1-90 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☒ Claim(s) 1-18 and 28-72 is/are allowed.

☒ Claim(s) 19-27 and 73-90 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☒ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been
☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☐ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

Art Unit: 1745

DETAILED ACTION

Response to Amendment

1. This Office action addresses claims 1-90. Claims 1-18 and 28-72 are allowed. Claims 73-90 contain allowable subject matter, but are rejected under 35 USC 112, second paragraph.

Claims 19-27 remain rejected for the reasons of record. Therefore, this action is made final.

Note: as a reminder to Applicants, the declaration is still defective because it does not list all those applications of which the present application is a continuation-in-part.

Claim Rejections - 35 USC § 112

2. Claims 73-90 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 73, line 17 and claim 74, line 1 recite the limitations “first height” and “first length”. “First” should be changed to “second” in accordance with the rest of the claim terminology (the amendment required “second” to be changed to “first”, which was incorrect). Similarly, in claim 82, line 15, “first” should be changed to “third”. Correction is required.

Claim Rejections - 35 USC § 103

3. Claims 19-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Crespi et al (U.S. Pat. 5,458,997) in view of Moses et al (U.S. Pat. 4,937,154).

Art Unit: 1745

Crespi et al teach an electrode assembly having two substantially straight sides comprising spirally-wound anode and cathode assemblies (Fig. 1). At the bottom of column 2 and the top of column 3, the following elements are taught: active material layers (cathode: silver vanadium oxide + PTFE + carbon black; anode: Li metal) pressed onto current collectors (made of nickel or titanium), tabs on the edges of the collectors, and a separator.

Crespi et al do not explicitly teach that the anode current collector is shorter in length than the cathode current collector.

Moses et al teach a spirally-wound cell in which the cathode is longer than the anode in column 2, line 25.

Therefore, the invention as a whole would have been obvious to one of ordinary skill in the art at the time the invention was made because Moses et al provide motivation for the artisan to use such a configuration. As taught by Moses throughout the patent, a longer cathode provides improved safety in such occurrences as dendrite formation and voltage reversal. Although it is not explicitly taught that the cathode *current collector* is longer, it would still be within the skill of the art to ascertain this from Moses and apply it to Crespi.

Response to Arguments

Applicant's arguments filed March 6, 2000 have been fully considered but they are not persuasive. Applicants have not provided any substantive reasons for not combining the references, other than "there is no teaching of the desirability of making these specific dimensional

Art Unit: 1745

changes in a battery of the type described in Crespi". As stated in the rejection above, the Examiner believes there *are* teachings of the desirability of this dimensional change in the patent of Moses. Furthermore, since both patents relate to spirally-wound nonaqueous batteries with lithium anodes, the combination of these two references is still deemed to be proper.

4. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Crespi et al in view of Moses et al as applied to claims 19-26 above, and further in view of Kelm et al (U.S. Pat. 5,486,215).

The combination of Crespi and Moses does not disclose a separator covering the anode assembly and having an opening through which the first connector tab projects.

Kelm teaches this configuration in column 4, lines 60-66.

Therefore, the invention as a whole would have been obvious to one of ordinary skill in the art at the time the invention was made because the patent of Kelm shows that these types of separators are known in the art and are used in cells almost identical in structure to Crespi. Thus, the artisan would see from Kelm that this type of separator would be an advantageous modification of the battery of Crespi because it provides coverage of both sides of the anode as well as a slot for the tab to go through.

Art Unit: 1745

Allowable Subject Matter

5. Claims 1-18 and 28-72 are allowed.
6. Claims 73-90 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

7. The following is a statement of reasons for the indication of allowable subject matter:

The reasons for the allowability of claims 1, 10, 37, 46, 55, 64, and 73 have been addressed in the previous Office action. The Examiner has withdrawn the grounds of the obviousness rejection of independent claims 28 and 82 (Crespi et al in view of West, U.S. Pat. 4,010,405). The Examiner concluded that Applicant's arguments were persuasive, and that the artisan would not be likely to combine the teachings of West with the battery of Crespi. West discloses a capacitor, which is generally regarded as a divergent art from batteries. Furthermore, West does not appear to disclose an alkali metal anode, or current collectors for each electrode. Thus, the artisan would have no real reason to apply the teachings of West to the battery of Crespi, and as a result, claims 28 and 82 are deemed to be allowable.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO**

Art Unit: 1745

MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan Crepeau whose telephone number is (703) 305-0051. The examiner can normally be reached Monday-Friday from 9:30 AM - 6:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Maria Nuzzolillo, can be reached at (703) 305-3776 from Monday-Thursday. The phone number for the organization where this application or proceeding is assigned is (703) 305-5900.

Documents may be faxed to (703) 306-3429. The official fax number for documents of extreme importance is (703) 305-3599 (it will take longer to receive documents faxed to this number; therefore the first number is preferred).

Any inquiry of general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

JSC

May 6, 2000

Maria Nuzzolillo
Supervisory Patent Examiner
Technology Center 1700

